

Remarks

Applicants request reconsideration of this application in view of the above amendments to the claims remaining in the application and the following remarks. Claims 1-6, 8-9 and 11-18 are presently pending in the application. Applicants have amended independent claims 1, 14 and 17 to more distinctly claim and particularly point out the invention.

***Rejection Of Claims 1-11
And 13-15 Under 35 U.S.C. § 102(a)***

Claims 1-11 and claims 13-15 stand rejected under 35 U.S.C. § 102(a) as being clearly anticipated by Koji (JP 2002-143952). Applicants respectfully submit that the rejections of claims 1-11 and 13-15, as amended, is improper because the Koji published application is not available as prior art against Applicants' invention. Applicants filing date precedes the date of publication of Koji, as will be discussed in greater detail below.

A translation of the Koji reference was provided by the Examiner. Since the translation appears to be a machine translation, Applicants reserve the right to challenge the accuracy of the translation at a later date. Koji discloses a rolling hemming device and a method for using the rolling hemming device. Page 1 of Koji section 43 indicates the date of publication of the application as May 21, 2002. Applicants' filing date is May 10, 2002. 35 U.S.C. § 102(a) states that a person shall be entitled to a patent unless the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the Applicants for a patent. Applicants' May 10, 2002 filing date predates the Koji reference publication date. Koji is not prior art and claims 1-6, 8-9 and 13-15 are submitted to be allowable.

Even if the Koji publication is available as prior art, the Koji publication fails to anticipate Applicants' invention as claimed in amended claims 1-6, 8-9, 11 and 13-15. Independent claim 1 has been amended to specify that the shaped portion engages an intermediate portion of the bendable flange between a bight portion and the inner portion of

the flange that is contacted by the cylindrical surface. The shaped portion is formed by at least two surfaces that together define a cavity relative to a chord extending between the first and second circumferential lines. The shaped portion applies a force to the intermediate portion at an angle relative to the first direction in which the cylindrical portion is acting to compress the hem radially as the cylindrical surface presses against the inner portion of the flange.

Independent claim 14 specifies that a first forming surface of the forming tool presses a distal portion of a hem flange of the outer panel toward the surface of the inner panel in a first direction. Either a second or third forming surface engages an intermediate portion of the hem flange and applies a force to the intermediate portion in a second direction at an angle relative to the first direction to compress the hem radially as the first forming surface presses in the first direction against the distal portion of the hem flange. It is respectfully submitted that none of the prior art of record discloses or suggests this unique forming tool for forming a compressed radius hem by compressing the radius of the hem by applying an angularly oriented force to the hem as the hem is being formed into engagement with the outwardly extending flange of the inner panel.

Rejection Of Claims 12
And 17-18 Under 35 U.S.C. § 102(b)

Claims 12 and claims 17-18 are rejected under 35 U.S.C. § 102(b) as being anticipated by Sawa (5,224,253). Applicant respectfully submits that the rejection of claims 12 and 17-18 as amended is improper because Sawa fails to teach all of the limitations of claims 12 and 17-18.

Referring to Figure 14 of the application, a tool 60 is shown with a cylindrical surface 62 and a concave portion made up of additional surfaces 64, 66 and 68. The cylindrical surface 62 is oriented to contact an inner portion of the flange 72 as it is pressed against the outwardly extending flange of the inner panel 16 while at least one of the surfaces 64, 66, 68, forming the shaped portion engages an intermediate portion of the flange 74. The cylindrical surface applies a force to the inner portion of the flange in a first direction to flatten the flange against the outwardly extending flange of the inner panel. The shaped portion

applies a force in a second direction normal to the intermediate portion of the flange and at an angle relative to the first direction.

Referring to Sawa, an apparatus for hemming a workpiece is disclosed that includes a roller with both a flat circumferential section and, contiguous to said flat section, a concave section. Sawa discloses that a portion of the concave section namely the center of section 20a, has a greater circumference than the cylindrical surface (see Sawa, Figure 6). However, Sawa fails to provide any teaching of a shaped portion defined by a multiple contiguous section of surfaces engaging the workpiece. The concave section refers to a relief groove 21 identified in Figure 6. The relief groove 21 is provided to prevent the corner of an upturned edge from being pressed down in the finish bending process. Therefore, the purpose of the concave portion is to prevent contact with the workpiece. This is completely contrary to the invention as now claimed. Because Sawa fails to teach all of the limitations of independent claim 1, Applicants submit that the rejection of claim 12, under 35 U.S.C. § 102(b) is improper. Accordingly, Applicant requests that the rejection of claim 12 be withdrawn.

***Rejection Of Claims 17 and
18 Under 35 U.S.C. § 102(b)***

Claims 17 and 18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sawa. Applicant respectfully submits that the rejection of claims 17-18, as amended, is improper because Sawa fails to teach all of the limitations of claims 17-18.

For example, referring to Figure 3 of this application, the cylindrical surface 30 may be oriented to contact an inner portion of the flange 26 as it is pressed against the outwardly extending flange of the inner panel 16 while at least one of the surfaces 34, 36 forming the shaped portion engages an intermediate portion of the flange that extends from a bight portion 38 to the inner portion 26. The concave portion preferably applies force in a direction normal to the intermediate portion of the flange.

In contrast, the method of hemming an outer panel disclosed in Sawa comprises the steps of (1) placing inner and outer panels together, (2) executing a pre-hem pass, (3) executing a final pass, (4) wherein the pre-hem pass forms an acute angle between the inner and outer panels, and (5) wherein the final pass presses the inner and outer panels into locking engagement.

However, Sawa fails to provide any teaching of engaging a shaped section of the forming tool with any portion of the flange. In contrast, the relief groove does not come in contact with the workpiece. Because Sawa fails to teach all of the limitations of the independent claim 17, Applicants submit that the rejection of claim 17 under 35 U.S.C. § 102(b) is improper. Furthermore, because claim 18 depends from claim 17, Applicants submit that the rejection of claim 18 is also improper. Accordingly, Applicants request that the rejection of claims 17-18 be withdrawn.

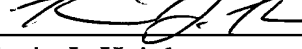
Rejection Of Claim 16
Under 35 U.S.C. § 103

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over either Koji or Sawa. Applicants have amended independent claim 14 to better describe the invention. Applicants respectfully submit that the rejection of claim 14, as amended, is improper with reference to both Sawa and Koji because each fails to teach all of the limitations of claim 14 as explained above. Moreover, neither Koji or Sawa disclose a press die. Therefore, because claim 16 depends from claim 14, Applicants submit that the rejection of claim 16 is also improper. Accordingly, Applicants request that the rejection of claim 16 be withdrawn.

CONCLUSION

For the above-cited reasons, all the claims presently pending in this application are submitted to be allowable. The Examiner is invited to call the Applicants' undersigned attorney if it would advance the prosecution of this application. The Examiner is respectfully requested to pass this case to issue.

Respectfully submitted,
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